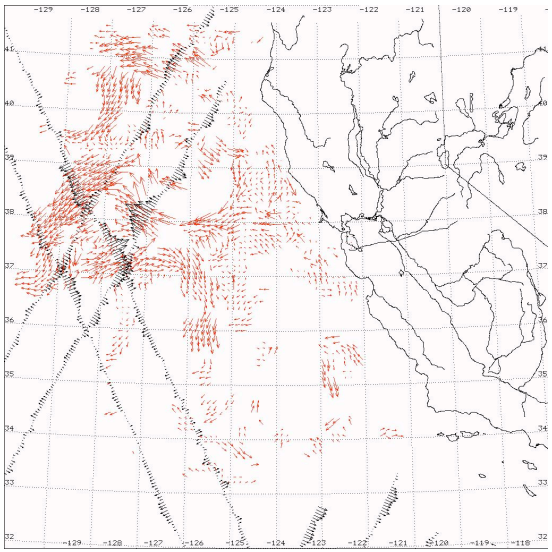
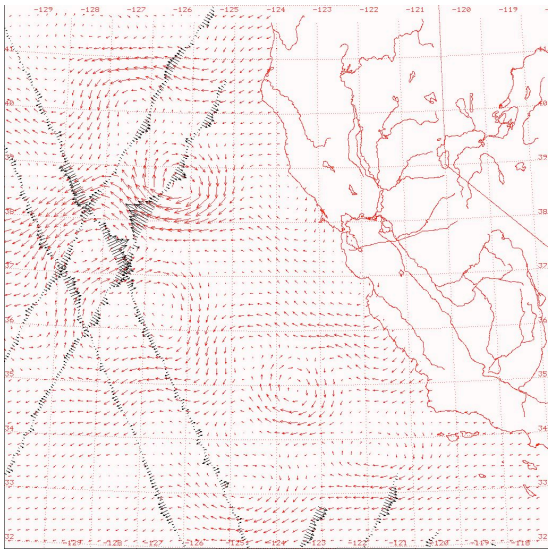
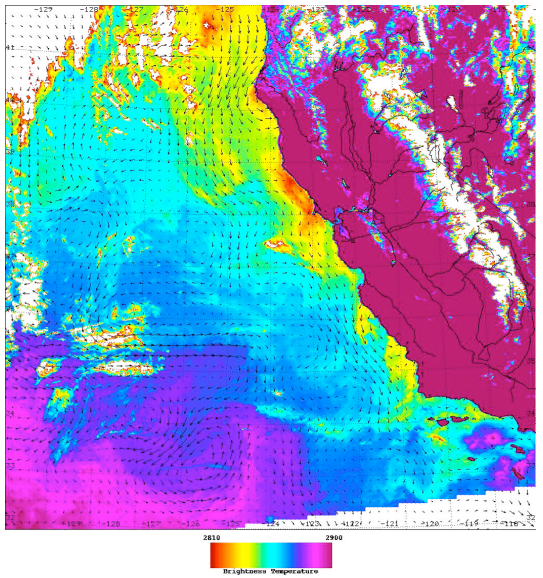
Coastal Surface Current Mapping with Radiometry and Altimetry



Composited MCC currents (red) computed from AVHRR images with altimeter currents (black) overlain for Sep.13-16, 2003.



OI currents from MCC method (red) with altimeter currents (black) overlain for Sep. 13-16, 2003.



10-day OI currents from MCC method and altimetry centered on Apr. 8, 2003.

(W. Emery, D. Matthews, R. Crocker, D. Baldwin)

The California Current is representative of the complex temporal and spatial variability that can be seen in an eastern boundary basin. Conventional oceanographic measurements are unable to resolve these relatively small scale variations, but by employing both satellite imagery and satellite altimetry we are able to resolve this complex structure and its variations in space and time. In addition, using historical satellite imagery it is possible to extend this study back into the past. This system focuses on resolving these variations and later studies will relate these variations to various forcing functions. These images demonstrate that ocean surface currents derived from sequential thermal images can be merged with altimeter derived geostrophic surface currents to form a high-spatial resolution surface observational product. *http://ccar.colorado.edu/research/cali/*